GUJARAT TECHNOLOGICAL UNIVERSITY

Wireless Communications Networks and Systems (EC)

M.E. Semester: II

Subject Name: **Neuro Computing and Applications (Major Elective - III)**

Sr. No.	Course Content
1.	Biological and Artificial Neuron, Perceptron model, Adaline model, Different types of Activation functions.
2.	**Learning Techniques:** Supervised and Unsupervised learning.
3.	Multilayered feed forward Networks, Back propagation algorithms and its improvements.
4.	Applications of back propagation algorithm to statistical pattern recognition,
5.	Classification and regression problems, Advantages of Neural Networks over statistical classification techniques,
6.	Recurrent networks, Radial Basis Function Networks as an interpolation model, Time delay Neural Networks for forecasting problems, probabilistic Neural Networks,
7.	Kohonen's Self Organizing map, Self organizing map with quadratic functions and its applications medical imaging, Adaptive Resonance, Theory Model, Extensive sessions in
8.	MATLAB for solving statistical pattern recognition, classification, regression, and prediction problems using different kinds of Neural Network Models.

Reference Book:

1. Neuro-Fuzzy and Soft Computing Lee Jng, Chuentsaisun, E G Maizutani, PE India.